



**United States Department of Agriculture
Natural Resources Conservation Service**

Water Management Enhancement Activity - Remote Monitoring of Irrigation Pumping Plant

Remote Monitoring of Irrigation Pumping Plants

Irrigation water and energy costs associated with pumping irrigation water are a critical resource concern. Even the most careful managers cannot manage the water on all of their fields on a continuous basis without increasing the potential for some runoff.

Benefits

Real time information on the status of irrigation systems helps operators to prioritize the field visits to observe the system and make necessary adjustments for proper function. New technology monitors the status of the watering system and notifies the operator when there is a change (e.g., the pump has turned off or the system pressure has dropped).

Criteria for Water Management Enhancement Activity

This enhancement requires the implementation of a pumping plant monitoring system. This includes installation of necessary sensors and communication package at the pump with an automated recording and communication system. When operational, the system must monitor the status of the watering system and automatically notify the owner/manager of system status and changes that may warrant action. The annual operation, maintenance, and utilization functions of the remote monitoring system must be incorporated into an integral part of the water management system.

Reference:

Natural Resources Conservation Service. 1991. National Engineering Handbook, 2nd Edition, Chapter 15, Irrigation 210-VI. USDA-NRCS. Washington, D.C.

Natural Resources Conservation Service. National Engineering Handbook, Part 652, Irrigation Guide, 1996.

Natural Resources Conservation Service. National Engineering Handbook, Section - 15, Chapter 8, Irrigation Pumping Plants

Fischbach, P. E. and Schroeder M. A., Irrigation Pumping Plant Performance Handbook, 4 ed. 1982, Agricultural Engineering department, Lincoln, Nebraska